

Abstract

Phase and amplitude deviations, which are generated, for example, by cables connecting an array antenna of a CDMA base station and the base station, are calibrated in the baseband.

The base station comprises: an antenna apparatus 1; couplers 2; an RF unit 3 that converts a receive signal to a baseband signal, converts a transmit signal to a radio frequency, and performs power control; an A/D converter 4 for converting a receive signal to a digital signal; a receive beam form unit 6 that multiplies the receive signal by semi-fixed weight; a despreader 7 for this signal input; a time-space demodulator 8 for demodulating user data; a despreader 9 for probe signal; a space modulator 14 for user data; a spreader 13 for user signal; a channel combiner 12; a Tx calibrator 11 for controlling calibration of a signal; a D/A converter 10; a unit 16 for calculation of correlation matrix for generating a probe signal used for controlling an Rx calibration system and a TX calibration system; a spreader 17 for probe signal; a power control unit 18; a D/A converter 19; an RF unit 20 for probe signal; an A/D converter 21 for signal from the couplers 2; and a despreader 22.